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Instructions for:  
*Ensemble® IV &  
Ensemble IV  
Home Theater*  
Speaker Systems  
by Henry Kloss

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## Important – Please Read First



**T**hank you for choosing an *Ensemble IV* speaker system. The basic model comes with two satellites for regular stereo reproduction, while the *Ensemble IV Home Theater* (HT) comes with five satellites for reproducing the left, right, center, and surround channels of a home theater surround system. The two models are otherwise identical.

Like all speaker systems, the sound of either *Ensemble IV* is very much influenced by its placement in the listening room. Unlike conventional models, however, *Ensemble IV* systems consist of several compact units that can be placed where they sound best without intruding on your living space. There is no need to sacrifice sound quality to decor, or vice-versa.

If you place your *Ensemble IV* system in the listening room casually, it will sound at least as good as conventional speakers. However, to achieve even better

sound, we urge you to experiment with placement at some length, a process aided by the instructions that follow.

If you have any questions or problems, please consult the store where you purchased the system, or call a Cambridge SoundWorks Audio/Video Consultant toll-free.

### **Cambridge SoundWorks**

**1-877-YES-HIFI  
(1-877-937-4434)**

24 hours a day,  
every day

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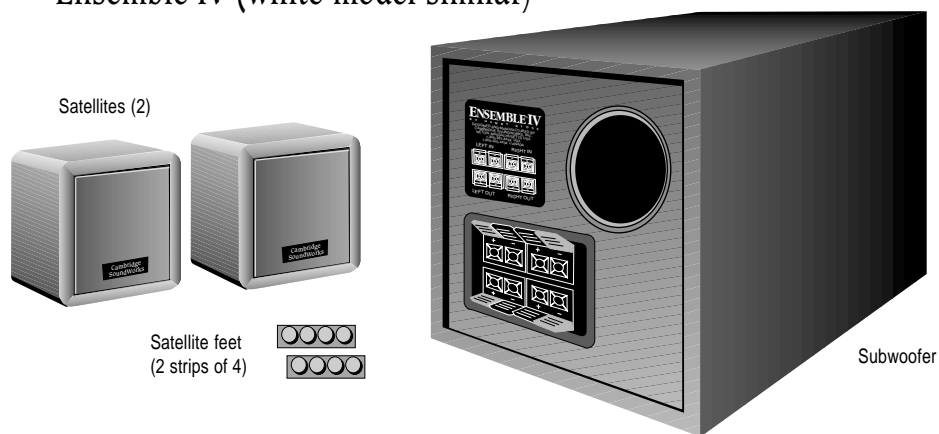
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## Unpacking The System

As you unpack *Ensemble IV*, please examine each speaker unit carefully for signs of shipping damage. If there is any damage, *do not discard the shipping carton, and do not install or use the system*. Consult the store where you purchased the system or call Cambridge SoundWorks at 1-877-YES-HIFI for assistance. It's a good idea to save the carton and its packing inserts in case you have to ship your system.

All the items shown should be included; inform your store or Cambridge SoundWorks if anything is missing.

### Ensemble IV (white model similar)



### Ensemble IV Home Theater also includes...



The white version of this system includes one black satellite for use as the center channel.

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## Installing And Connecting The Speakers

All satellites are functionally similar. The single black satellite in the white *Ensemble IV Home Theater* is intended for use on or above the TV monitor as the center channel speaker.

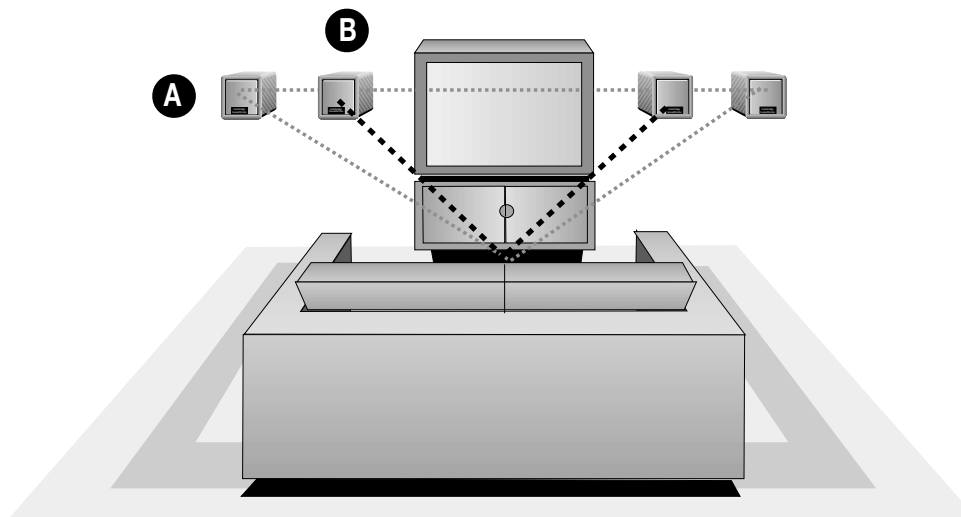
First decide where to place *Ensemble IV's* speaker units in your listening room. The section "Speaker Placement" which follows gives you practical guidelines.

Once you have determined the likely placement for the satellites and subwoofer, consult page 6. The "Wiring Diagram" shows how to interconnect the speaker units and your amplifier.

Prepare each length of speaker wire according to the section on page 7. Leave an extra three or four feet of length on each individual length of wire. This extra length lets

you experiment with placement. Then make the connections as instructed on page 7.

If possible, listen to the complete system before you make the installation permanent. You may find small changes in the satellite positions improve the sound. The satellite and subwoofer may be safely moved while playing if sufficient slack is left in the speaker wires.



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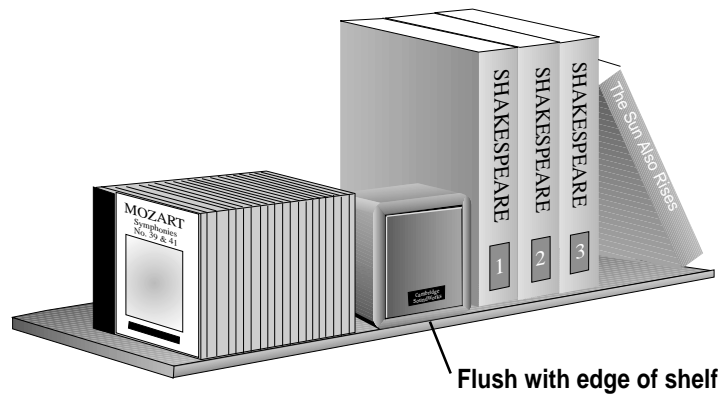
## Speaker Placement

The left and right satellites (both models)

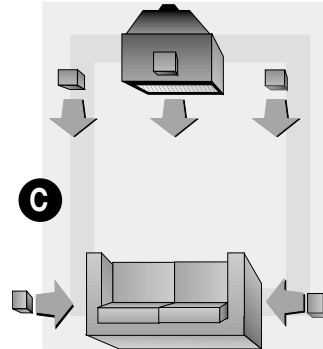
- For stereo music listening, try to place the satellites to form an equal-sided triangle with your favorite listening position (**A**). Because the room's surfaces tend to integrate the sound before it reaches you, perfectly symmetrical placement is not necessary.
- In a home theater installation, try to place the satellites so that they form a 45° angle with your preferred seat (**B**), which takes best advantage of how movie soundtracks are mixed. The satellites are magnetically shielded, so they can be placed close to the TV. The subwoofer is *not* magnetically shielded, however, and must be at least 18 inches from the set to prevent picture distortion.
- Have a clear line of sight to each satellite. This insures that higher frequencies are not blocked.
- For music listening, if the satellites are across the room from the listening area, their height is usually not critical; they

can be placed at eye level on the wall, up near the ceiling, or most anywhere in between. If they are close to the listening area—and in *any* home theater system—it is best to have them at or near ear level.

- If you put the satellites in bookshelves or in a wall system, place them with their front surfaces flush with the front of the shelves; you can then surround them with books, CDs, tapes, etc. (See diagram below).



- Take advantage of the satellites' small size and consider locations where regular speakers wouldn't fit, such as window sills or a mantelpiece.
- The satellites can also be wall mounted as described on page 11. Use No.10 screws and anchors. However, don't mount them permanently until you've had a chance to experiment with placement and are sure of their final location.



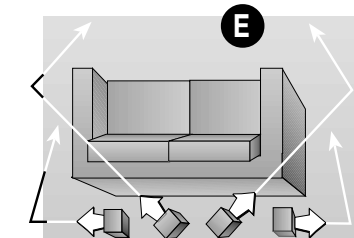
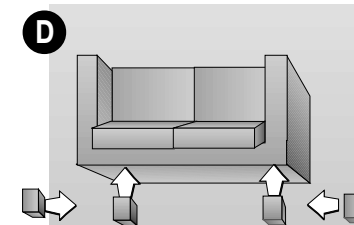
### The Center/Surround IV satellites (*Ensemble IV HT only*)

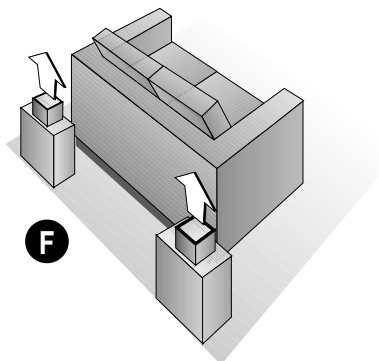
Arrange the three remaining Center/Surround IV satellites for center and surround channel reproduction using the guidelines that follow.

- See **Diagram C**. Place the center channel's satellite directly on top of the TV or directly below it. This satellite's primary function is to blend the sound of spoken dialog or special effects with what you see on-screen.
- Place the left, center and right satellites close to the "ear level" of the listeners.

- If possible, mount the surround or rear satellites on either side of your listening position, not directly behind it. Each satellite has a convenient "keyhole" to allow for easy wall mounting. Ideally, the satellites should be placed two to three feet above the listeners.

Placing the surround speakers directly behind the listeners (like the inner pair in **Diagram D**) will





decrease the left to right “surround effect”. Try placing the satellites further apart, like the outer pair in **Diagram D**. Or you can try the following techniques:

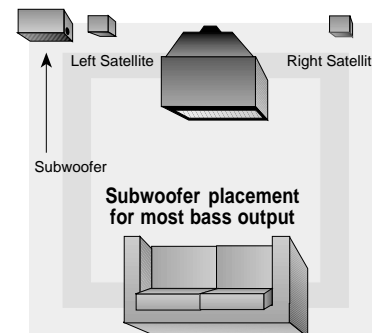
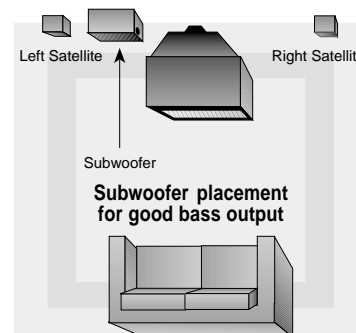
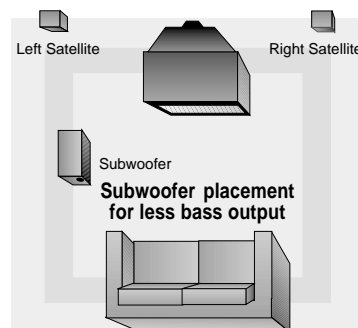
- See **Diagram E**. Place the rear speakers as high as possible and aim them away from the listening area.
- See **Diagram F**. Place the speakers so each faces upwards—either directly on the floor, on small tables or stands or using right angle wall mounts (available from Cambridge SoundWorks at 1-877-YES-HIFI).

## The subwoofer

The ear can not “localize” low-bass sound, so *Ensemble IV*’s subwoofer’s exact placement can not be heard. It can be placed inconspicuously for the most bass output, independent of the satellites’ location.

To start, simply place the subwoofer on the floor against the wall nearest the satellites. After some listening, you can experiment further using these guidelines:

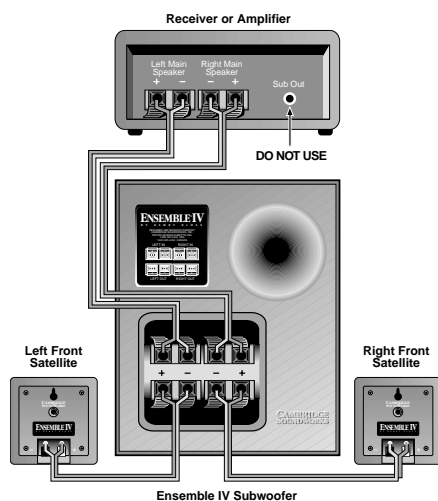
- Be sure the bass port (the hole in the subwoofer next to the input terminal) has at least two inches of clearance.
- The maximum potential low bass output results with the subwoofer placed in a corner (on the floor or mounted high against the ceiling). It is possible this placement will require you to decrease the bass control of your amplifier for balanced sound. Use a corner near the front satellites if possible. Corner placement is also the best way to fill a very large room with bass output.
- If space is tight or if you wish to conceal the subwoofer, try placing the subwoofer behind the listening area.
- Less bass output results from subwoofer placement on the floor away from any walls or placement off the floor. Avoid this placement if possible. It may be necessary to increase the Bass Control of your amplifier to compensate for the poor bass reinforcement of this placement.
- Don’t place the subwoofer in the same cabinet or on the same shelf with a turntable. A condition called “acoustic feedback” could result that will muddy the bass or set up a loud, low-frequency rumbling.



# Wiring Diagram

## Ensemble IV

*Ensemble IV* owners—connect the Left and Right speaker outputs of your amplifier to the Subwoofer's "From amplifier left and right speaker output" inputs. Connect the satellites only to the Left and Right satellite speaker outputs on the Subwoofer. See "Subwoofer Output Note" in the next column.



## Ensemble IV Home Theater

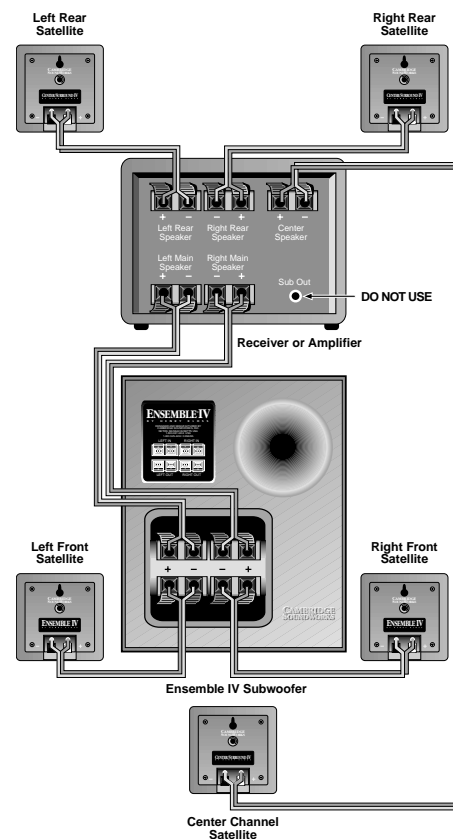
*Ensemble IV Home Theater* owners—connect the Left Front and Right Front speaker outputs of your amplifier's main speaker outputs to the Subwoofer's "From amplifier left and right speaker output" inputs. Connect the satellites to be used as the Left Front and Right Front speakers only to the Left and Right satellite speaker outputs on the Subwoofer.

Connect a satellite directly to each of your receiver or amplifier's left rear speaker, right rear speaker, and center speaker outputs.

### Subwoofer Output Note:

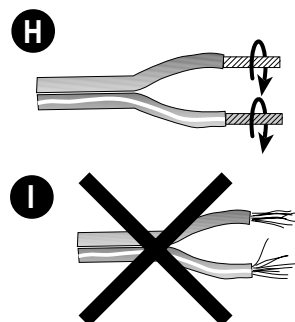
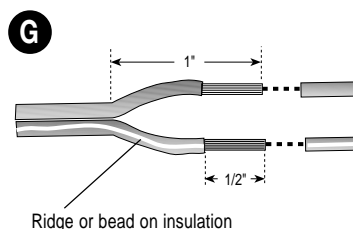
(For both *Ensemble IV* or *Ensemble IV HT*)  
The *Ensemble IV* or *Ensemble IV HT* does not connect to the "subwoofer output" found on most Dolby Surround and all Dolby Digital receivers. If you have a Dolby Digital receiver, be sure the subwoofer output is turned "OFF". Consult your receiver or amplifiers' instructions to accomplish this.

This subwoofer output would be used if you decide to connect a large, internally-amplified subwoofer to your receiver in addition to the *Ensemble IV* or *Ensemble IV HT*.



## Preparing Speaker Wires

1. After choosing the connection configuration, cut speaker wire into the appropriate lengths. We recommend you use a wire cutter/stripper.
2. Separate the two individual conductors at the end of each speaker wire for a distance of one inch (see **G**, below).
3. Strip  $\frac{1}{2}$  inch of insulation from each individual conductor, being careful to apply only enough pressure to cut through the insulation and not the wire strands.
4. Twist the bared wire strands tightly together (**H**). Be sure there are no loose strands that could short across the connecting terminals on the speakers or receiver (**I**).

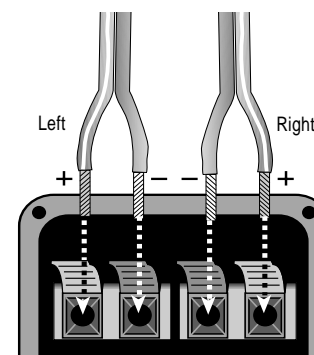
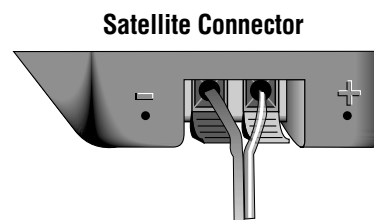


## Making Connections

- With either *Ensemble IV* or *Ensemble IV Home Theater*, the left and right satellites *must* be connected to the subwoofer's Left Out and Right Out connectors; the subwoofer's Left In and Right In connect to the left and right speaker outputs on your receiver or amplifier. Only the center and surround satellites of an *Ensemble IV HT* system connect directly to the appropriate outputs of a surround sound receiver or amplifier.
- Each connector on the satellites and subwoofer works the same way: Press the spring-loaded red or black tab back to reveal the

connection hole. Insert the stripped end of the speaker wire. Release the tab.

- *Connect all the speaker units identically.* Connect the red (+) and black (–) terminals on the speaker units to their red and black counterparts on your receiver or amplifier. Use the marked/copper leads for interconnecting the red terminals, and the unmarked leads for the black terminals.



**Subwoofer Connector (detail)**



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## Configuring Your Surround Sound Electronics

Surround sound receivers and decoders may require the user to configure amplifier channels for different size speakers. The selector may be:

- Switches in the back of the amplifier.
- Front panel read-outs selected by a remote control.
- On-screen video monitor options selected by a remote control.

Be sure to set your surround sound processor or receiver as follows:

**Dolby Surround® with Pro Logic®**

- Center Speaker: **Normal**

**Dolby Digital®**

- Left and Right Main speakers: **LARGE**
- Center and Rear (or Surround) speakers: **SMALL**  
(The **OFF** or **PHANTOM** center channel mode cancels output to the center channel of Dolby Digital or Dolby Surround with Pro Logic. Do not use these settings with Ensemble IV HT.)
- Subwoofer or Subwoofer Output: **OFF**  
See "Subwoofer Output Note" on page 6.

### Surround Versus Stereo Listening

When viewing movies or other Dolby®-encoded programs, set your receiver or decoder to Pro Logic or Dolby Digital (AC-3).

Most TV broadcasts and almost all music recordings are not Dolby Surround-encoded. When listening to this program material, *be sure to turn off Pro Logic processing*. Switch to either normal stereo operation or some non-Dolby surround mode. This will ensure correct stereo effect.

On program material that isn't encoded for Dolby Surround, the Pro Logic circuits cause the center speaker to play instead of the left and right speakers. Most stereo effect will be lost and the center channel speaker will play too loudly.

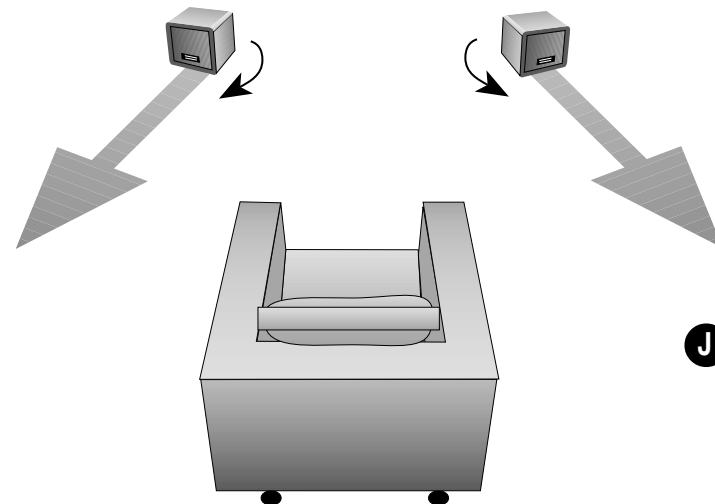
A Dolby Digital system will not produce any sound in the Dolby Digital mode if the source is not Dolby Digital-encoded.

## Optimizing The Sound Of Your System

It is almost impossible to find an acoustically ideal placement for a conventional, single-cabinet speaker in a listening room. This is because room acoustics affect the low-bass frequencies differently from the rest of the range. If you place the speaker so that the room helps the bass, it is likely to hinder the upper ranges (and vice-versa).

Thus placing conventional speakers almost inevitably entails a compromise, even before proper stereo effect, decor, and convenience are taken into account.

The usual restrictions don't apply to *Ensemble IV* because its subwoofer separates the low-bass out from the rest of the range. You can place the subwoofer and the



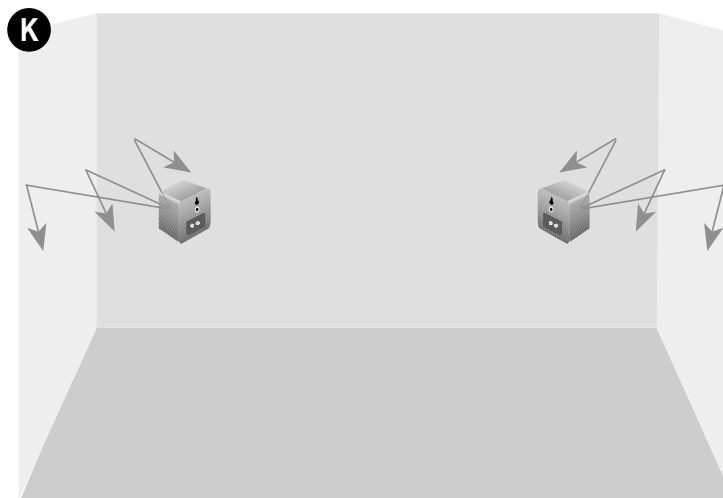
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satellites differently to take advantage of the room in *both* the lower and upper ranges. Yet the units are so compact that even when placed optimally, they have little or no visual impact on your living space.

We urge you to take full advantage of *Ensemble IV* by trying the speaker units in different locations within your listening room. Of course, if the system sounds

satisfactory from the moment you connect it and first turn it on, you may wish to go no further. But if you have any doubts or simply wish to see if an improvement can be made, we suggest you experiment with placement using the following guidelines:

- Let your ears be your guide, and trust them. When *Ensemble IV* sounds right to you, you've found the best placement.



- Low-bass increases as you move the subwoofer closer to the intersecting room surfaces.

The sound is apparently brighter with the satellites close to the listening area than with them across the room. The apparent fullness of the sound, a function of mid-bass rather than low-bass, is greater with the satellites against a wall than with them out in the room.

This is not to imply that “more is better,” be it bass, brightness, or fullness. The point is that a *change* can be easily affected simply by moving one or more of the speaker units—and with *Ensemble IV*, that is easy to do.

- The recorded quality of program material varies *greatly*, so be sure to listen to a variety of recordings to prevent being misled by unusual characteristics of a particular recording.
- If it is necessary to place the satellites close to the listening area and you find the sound too bright, try placing the units at an angle so that listeners aren't directly on their axis (J, previous page). In a small room, you might even try aiming

the satellites away from the listeners altogether into the corners of the room, to scatter the highs for a more spacious sound (K, below).

- The subjective “fullness” of the sound is not so much a function of the low-bass as it is of the mid-bass. Similarly, the subjective “openness” of the sound is not so much a function of the high treble as it is of the *lower mid-range*. Both of these critical ranges are reproduced by the satellite units, and so are affected by their placement.

Mid-bass and mid-range balance are usually best with the satellites against a wall. If they are out from the wall and sound too thin, particularly on vocal recordings, try moving them back against the wall. Conversely, if they are against the wall and sound too heavy or boomy, particularly on male voices, move them out from the wall.

- Remember that the strength of low-bass sounds is markedly affected by the position of the subwoofer. Refer to the illustration on page 5 for guidance if the low-bass is either too strong or not strong enough.

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## About Amplifier Power

- If you're not happy with what you hear and are having trouble improving it, check with your store, or call a Cambridge SoundWorks Audio/Video Consultant at 1-877-YES-HIFI (1-877-937-4434) toll-free.

*Ensemble IV* can be used safely to play music with most amplifiers and receivers designed for home listening. However, use common sense to prevent strong non-musical transients; keep the volume down when connecting or disconnecting components, raising or lowering your turntable's tonearm, and so on. This will help protect your ears as well as the speaker units.

If at a given volume level the sound is consistently "grainy" or "gritty", and/or there is clearly noticeable distortion on deep bass, you may be overdriving your amplifier or receiver. Back off on the volume control until the symptoms disappear. If that is not loud enough for you, and you suspect that your amplifier or receiver is inadequate, contact your store or call a Cambridge SoundWorks Audio/Video Consultant who will advise you on how much power would be appropriate for your particular circumstances.

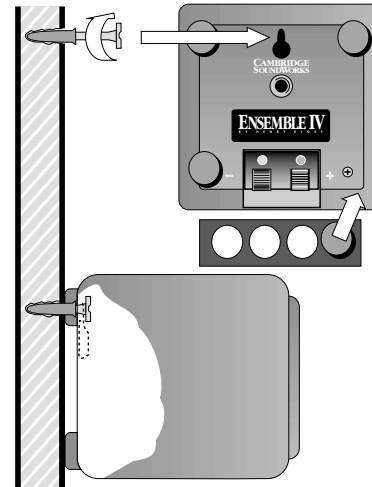
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## Finalizing Your Installation

- Apply the self-adhesive rubber feet to the bottom of a satellite if you place them on a flat surface. It will protect the surface and keep the satellite from sliding. If you ever need to remove a foot, gently slide the edge of a knife under one edge and slowly *peel* it off. If you try to “pop” it off, you may damage the cabinet’s finish.
- The satellites may be hung directly on a wall. Simply screw No. 10 screws into the wall so that their heads protrude about  $\frac{3}{8}$  inch to fit into the keyhole slots on the back of each satellite (see diagram at right).

Plastic anchors may be needed to secure the screws in particularly hard or soft material. If so, drill  $\frac{1}{4}$  inch holes in the wall, and tap the anchors into the holes until they are flush with the wall. Then screw the screws into the anchors until they protrude  $\frac{3}{8}$  inch from the wall.

- The threaded fitting in the back of each satellite allows attaching swivel wall-mounts and speaker stands available from Cambridge SoundWorks.
- The satellites can be cleaned with a window cleaning product. Use a soft, *lint-free* cloth only. Avoid spraying the cleaner directly on the speaker grilles to prevent damage to the speaker drivers.
- Clean the subwoofer with a damp cloth. Do not use polish.



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## 10-Year Limited Warranty

To the original purchaser, Cambridge SoundWorks, Inc. will warrant the *Ensemble IV* or *Ensemble IV Home Theater* speaker system to be free from defects in material and workmanship for a period of ten (10) years from date of purchase. With respect to defects, Cambridge SoundWorks will, at its option, replace the product or repair the defect in the product with no charge to the original purchaser for parts or labor.

This warranty does not extend to any defect, malfunction or failure caused by misuse, abuse, accident, faulty hookup, defective associated equipment or use of the speaker with equipment for which it is not intended.

This warranty is valid only when the speaker is returned to an authorized store where it was

purchased. Or, if you bought directly from Cambridge SoundWorks, call for a Return Authorization Number for the unit and return it to the address below, freight prepaid, together with a copy of the original sales slip to establish warranty status. Please do not return the speaker system, or any of its parts, to the factory without prior authorization.

This is the sole and express warranty. This warranty is in lieu of all other warranties, expressed or implied, of merchantability, fitness for purpose or otherwise. In no event shall Cambridge SoundWorks be liable for incidental or consequential damages or have any liability with respect to defects other than the obligations set forth herein.

To ensure warranty coverage it is incumbent upon the original purchaser to inform Cambridge SoundWorks or any of its Authorized Service Agencies of the defect within the warranty period. The only acceptable method of establishing warranty status is a copy of the original proof of purchase indicating customers name and purchase date.

For warranty information contact:

Cambridge SoundWorks, Inc.  
311 Needham St.  
Newton, MA 02464  
1-877-YES-HIFI  
(1-877-937-4434)  
[www.cambridgesoundworks.com](http://www.cambridgesoundworks.com)  
email:  
[info@cambridgesoundworks.com](mailto:info@cambridgesoundworks.com)

## Difficulty?

If you suspect there's a problem with your *Ensemble IV* or *Ensemble IV Home Theater* system, contact the store where you purchased it, or call a Cambridge SoundWorks Audio/Video Consultant who will help you track the problem, which could be in some other component in your system. If together you agree that there is something wrong with your speaker system, you should return it to the store where you bought it. Or, if you bought directly from Cambridge SoundWorks, we will supply you with a Return Authorization Number for the unit. Please do not return the speaker system, or any of its parts, to the factory without prior authorization.

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